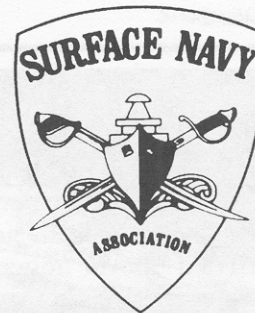


# SURFACE SITREP



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## THE INTEGRATED DEEPWATER SYSTEM A 21ST-CENTURY COAST GUARD FOR THE NATIONAL FLEET

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The Integrated Deepwater System's (IDS) progressive modernization and recapitalization of the Coast Guard has made steady progress since its contract award to Integrated Coast Guard Systems (ICGS) in June 2002. Described as the Coast Guard's "transformational centerpiece" by Commandant Adm. Thomas H. Collins, the Deepwater Program entails selective modernization of aging legacy assets and the introduction of three new classes of cutters and associated small boats, both manned and unmanned aircraft, integrated logistics support, and a network-centric system for C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance).

The most comprehensive recapitalization of the Coast Guard in its history is beginning to yield results at sea, and the scope of the Coast Guard's contributions to the National Fleet of interoperable Coast Guard and Navy assets will only increase as Deepwater gains momentum during the years ahead.

### Seamless Connectivity

On February 13, the crew of the 123-foot cutter USCGC *Matagorda*, on its first operational patrol following a major conversion as part of the Coast Guard's Deepwater Program, stopped a smuggler's boat in the

Florida Straits attempting to bring 25 Cuban migrants into the country illegally. *Matagorda*, outfitted with a more capable C4ISR system during its recent Deepwater upgrade, assumed the role of on-scene commander to coordinate the interdiction effort. After a long chase the smuggling boat was safely stopped two miles south



of the Dry Tortugas. The smugglers were turned over to Customs and Border Protection officials, and the migrants were all repatriated to Bahia de Cabanas, Cuba, on Feb. 14.

Late last year, crews on the Coast Guard Cutters *Gallatin*, *Rush*, and *Thetis* collectively seized more than 33,949 pounds of cocaine during law-enforcement deployments in the Caribbean—continuing the

Coast Guard's record-setting pace established during fiscal year 2004 when 240,518 pounds of cocaine were seized (shattering the previous record of 139,000 pounds interdicted in 2001). According to their commanding officers, Deepwater communication upgrades installed on these aging legacy cutters played a major contributing role in their success, because the operations involved multiple cutters, federal agencies, and foreign countries—mandating seamless connectivity and high levels of interoperability between all participants.

In each of these recent operations, the Deepwater Program's C4ISR upgrades allowed cutter crews to maintain a common operational picture and higher levels of maritime domain awareness. The upgrade included provisions for first-time use of a classified Local Area Network and the Secure Internet Protocol Router Network (SIPRNET), which affords a crew access to real-time intelligence information during current operations, access to Department of Defense satellite imagery, as well as increased speed of transmission through compressed bandwidth capability.

As gratifying as these early demonstrations of the efficacy of the Deepwater Program's acquisition strategy are to Deepwater's Coast Guard-industry team, they are but a harbinger of what



*The recently converted 123-foot cutter USCGC Matagorda and her new seven-meter "short-range prosecutor" small boat. Matagorda's conversion as part of the Deepwater Program included installation of a stern ramp to permit underway launch and recovery of the boat. Photo Courtesy of Bollinger Shipyard*

the future holds when new-construction Deepwater cutters and aircraft enter service later this decade. In this sense, the Deepwater Program will serve in a critical enabling role to allow the Coast Guard to meet its National Fleet Policy requirements.

### The National Fleet

The Navy-Coast Guard cooperative relationship is codified in a National Fleet Policy statement originally signed in September 1998 and updated by Chief of Naval Operations Adm. Vern Clark and Adm. Collins in July 2002. The policy is in place to ensure both services work together to synchronize their multimission platforms, infrastructure, and personnel to provide the highest level of naval and maritime capability for the nation's investment.

Greater Navy-Coast Guard cooperation offers many benefits to each service and the nation's defense, and the merits of greater synergy have only increased in importance since President Bush signed a maritime

security policy directive calling for a fully coordinated effort to protect U.S. interests in the maritime domain.

Adm. Clark has said the global war on terrorism's heightened requirement for improved homeland defense and maritime security has produced a Navy-Coast Guard partnership unlike anything the sea services have experienced in many years. Similarly, speaking of the longstanding history of joint Navy-Coast Guard collaboration, Adm. Collins said, "Partnership with the Navy and the Department of Defense allows an effective two-way flow of capability to meet both expeditionary and domestic security imperatives—all in the national interest." A number of initiatives are in motion to advance the National Fleet concept following senior-level talks between each service chief last November.

As Deepwater's Program Executive Officer, my responsibility is to do all in my power to assist the Coast Guard design and acquire the assets and systems offering the greatest potential to satisfy its mission requirements and the National Fleet Policy's guidance.

More than two years ago, I co-signed a Memorandum of Understanding with



*Adm. Thomas H. Collins (left), Commandant of the Coast Guard, and Adm. Vern Clark, Chief of Naval Operations, updated the National Fleet Policy agreement in 2002. U.S. Navy Photo*

Rear Adm. Charles Hamilton II, currently the Navy's Program Executive Officer Ships, and established a working group to commit our respective Program Executive Offices to specify common technologies, systems, and processes critical to both the Navy's future Littoral Combat Ship (LCS) and the Coast Guard's design and development of its Deepwater fleet of new cutters—including the National Security Cutter, the Offshore Patrol Cutter, and other platforms.

Since then, I also have signed agreements with similar objectives with the Naval Air System Command and the Marine Corps Systems Command for programs of mutual interest, especially as they relate to Deepwater's development of the Eagle Eye tiltrotor vertical takeoff-and-landing unmanned aerial vehicle (VUAV).

### Shared Purpose and Common Effort

The National Fleet policy provides specific goals for the linkage of the Coast Guard's Integrated Deepwater System to the Navy's LCS program. Implementation of this policy guidance will transform how the Navy and the Coast Guard work together by stipulating:

- A commitment to shared purpose and common effort focused on tailored operational integration of each service's multimission platforms, infrastructure, and personnel;
- Full cooperation and integration of non-redundant and complementary capabilities to ensure the highest level of maritime capabilities and readiness for the nation's investment;
- Having processes in place to synchronize research and development, planning, fiscal stewardship, procurement, development of doctrine, training, and execution of operations for the National Fleet; and



- Ensuring that all ships, boats, aircraft, and shore command-and-control nodes of the National Fleet will be interoperable to provide force depth for peacetime missions, homeland security, crisis response, and wartime tasks.

The Coast Guard's contribution to the National Fleet includes its statutory authorities (including law enforcement), multimission cutters, boats, aircraft, and C4ISR systems designed for the full spectrum of Coast Guard missions. The Memorandum of Understanding guiding our collaboration established a working group to specify common technologies, systems, and processes critical to both the Navy's LCS and the design and development of the Coast Guard's new cutters and patrol boats. This team is chartered to derive mutual benefits through a cooperative technical approach in areas of common interest.

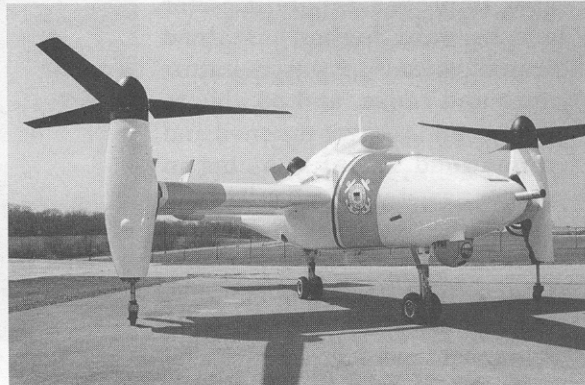
As the Navy transforms its forces, technologies, and operational concepts within the framework of *Sea Power 21*, the Deepwater Program's recapitalization strategy offers number of transformation intersections where each of our service's operational requirements overlap.

### A Layered Defense to Seaward

With regard to the National Fleet, the foundation of *Sea Power 21* rests with the network-centric capability that FORCEnet and systems like Cooperative Engagement Capability offer expeditionary force commanders—an evolutionary but dramatic transition to a force that can share digital tactical information and sensor data between ground, air, space, surface, and submerged platforms that are broadly dispersed across an operational theater.

A similar vision guides the develop-

ment of Deepwater's plans to upgrade and modernize surface and air platforms and their supporting C4ISR system for the Coast Guard's multiple missions. Deepwater C4ISR will serve as a critical enabler for attaining maritime domain awareness—an essential ingredient in providing needed levels



*Deepwater's Eagle Eye tiltrotor vertical take-off-and-landing unmanned aerial vehicle. Photo courtesy of Bell Helicopter*

of maritime homeland security, homeland defense, and global maritime security.

Deepwater's fully interoperable C4ISR system will provide improved means to communicate information and data quickly and securely between all Coast Guard units, the Department of Homeland Security, the Navy, and other federal, state, and local agencies. Just as FORCEnet will transform the Navy's operational capabilities by enabling more rapid decision-making and massed warfighting effects, Deepwater's transformation will see Coast Guard air and surface platforms serving as nodes for shared information and operational knowledge with command centers ashore—a potent force multiplier that will contribute directly to the development of a maritime domain awareness and a common operational picture. Capabilities also can be cascaded to other agencies as new joint competencies are forged.

This network-centric vision translates directly to improved inter-agency cooperation and interoperability between

the Department of Homeland Security and the Department of Defense as it relates to the intersection of homeland security and homeland defense mission areas. The potential for terrorist threats arising in the littorals make the coastal region of our maritime domain a geographic zone of immense importance.

In meeting its responsibilities for maritime homeland security, the Coast Guard plays a critical role in providing a layered defense that projects U.S. borders out to sea from our nation's ports, waterways, and coastal areas. Deepwater's improved operational capabilities are important building blocks in the Coast Guard's strategy. For this reason, and mindful of the continuing challenges and limitations associated with an aging and increasingly obsolete legacy fleet, Adm. Collins has described Deepwater as the Coast Guard's top capital priority.

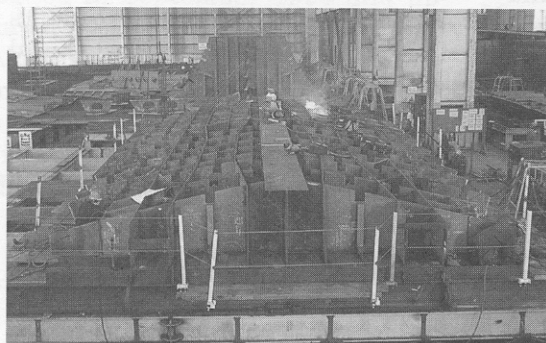
Deepwater will provide the Coast Guard with the operational capabilities, capacity, platforms, and systems necessary to focus on the *prevention* of attacks on the U.S. homeland, as well as the Department of Homeland Security's other top strategic goals of *threat awareness*, *protection* against terrorist attacks, and *response and recovery* should they occur. The benefits are also obvious when the Coast Guard operates in support of the Department of Defense for homeland defense and other expeditionary assignments with U.S. combatant commanders around the world.

In addition, it is important to note that Deepwater's more capable platforms also will enhance capabilities in the Coast Guard's other core missions, including enforcing laws and treaties in the U.S. maritime domain, promoting safe and efficient maritime activities, and protecting the marine environment.

## A Year of Progress

Deepwater marked numerous important milestones during 2004, and they all help the Coast Guard to advance its efforts to realize National Fleet policy goals. Beyond the past year's success story of C4ISR upgrades to legacy cutters, Deepwater's C4ISR shore-side upgrade was completed in 2004 at the Communications Area Master Station Pacific (CAMSPAC) facility at Point Reyes, Calif. The first shore-based IDS communications upgrade was completed in September 2003 at Communications Area Master Station Atlantic (CAMSLANT).

In June, the Coast Guard awarded ICGS the contract to begin production and delivery work on the lead National Security Cutter, Deepwater's largest cutter. Fabrication of the lead ship in the class began in early September at Northrop Grumman Ingalls Operations shipyard in Pascagoula, Miss., and keel-laying is scheduled this spring. The Coast Guard's contract for the second cutter in the class was awarded to ICGS in early January. Northrop Grumman Ship Systems will lead the production effort, with Lockheed Martin responsible for the design, manufacture, and integration of the cutter's systems for C4ISR.



Workers fabricate an inner-bottom hull section for the first National Security Cutter at the Northrop Grumman Ship Systems shipyard in Pascagoula, Miss. Photo courtesy of Steven J. Blount, NGSS

Also in June, the Coast Guard awarded a contract to ICGS to begin the design and final requirements work

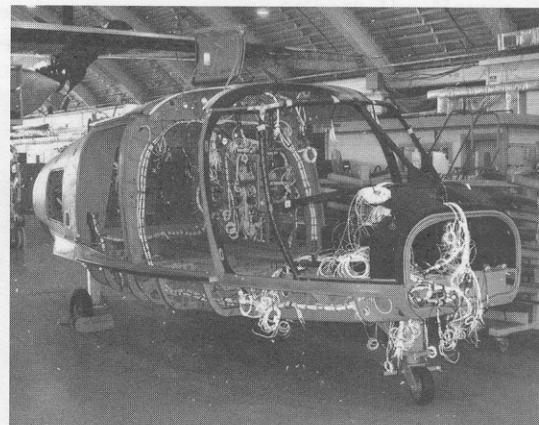
for the Offshore Patrol Cutter, Deepwater's medium-sized cutter. The design and final requirements for the third class of Deepwater cutters, the Fast Response Cutter, also will move forward quickly in 2005.

These new cutters will possess improved capabilities for sea keeping, higher sustained transit speeds, greater endurance and range, and be able to launch and recover manned and unmanned aerial vehicles in higher sea states—all critical to more effective maritime operations at sea and close to shore. Deepwater cutters, for example, will enable the Coast Guard to implement increased security responsibilities—including greater jurisdiction over foreign-flagged vessels, screening and targeting of vessels of interest, and on-board verification through boardings and enforcement-control actions.

**Past studies indicate that Deepwater's total aviation solution will deliver approximately 80 percent more flight hours than today's legacy assets, as well as improved use-of-force and vertical-insertion capabilities. There also was steady progress in Deepwater's modernization and recapitalization of Coast Guard aviation assets last year. For example, the first production re-engined HH-65 helicopter incorporating Deepwater upgrades completed its test flights successfully and entered full operational service at Aviation Training Center, Mobile, Ala., in early October. A second production line will allow the Coast Guard to accelerate this critical upgrade on its HH-65s, mindful of their reputation as the "workhorse of the fleet."**

Similar progress is evident in the recapitalization of the Coast Guard's fixed-wing aircraft inventory. In 2003, the Coast Guard awarded a contract to ICGS for con-

cept and technology development of a new maritime patrol aircraft. Initial contracts between Lockheed Martin and EADS CASA are for the procurement of three CN-235-300M



Deepwater's re-engining of HH-65 helicopters should be completed within 24 months. U.S. Coast Guard photo by PAC Jeff Murphy

medium-range surveillance maritime patrol aircraft. Delivery is scheduled for 2007 following configuration for Coast Guard missions. The contract also includes an option for spare parts and integrated logistic support, as well as an option for five additional aircraft. The CN-235-300M completed a successful Preliminary Design Review in December.

Deepwater's Eagle Eye tiltrotor VUAV successfully completed its Preliminary Design Review last March and its Critical Design Review in January.

## Performance is the Way Ahead

President Bush's fiscal year 2006 budget request provides \$8.1 billion for the Coast Guard—an 11 percent increase in Coast Guard discretionary funding over fiscal year 2005. This budget will continue the multi-year effort to modernize the Coast Guard, reduce risks to maritime security and safety, and provide Coast Guard men and women with the capabilities and competencies necessary to continue to enhance performance in all of their missions. The budget's funding will



continue the Coast Guard's urgently needed Deepwater recapitalization while reversing declining readiness trends and enhancing operational capabilities.

For these reasons, the fiscal year 2006 Deepwater budget is a critical investment in the Department of Homeland Security's mission to secure the American homeland as we build a more ready and capable 21st-century Coast Guard. The Coast Guard budget includes funding of \$966 million for the Deepwater Program, a 33 percent increase over last year's appropriation. This funding will enable:

- Acquisition of a third Eagle Eye VUAV, including mission sensor packages and ground control technology to use them;
- Accelerated re-engining of HH-65 helicopters using a second production line;
- Service-life extension, avionics, and radar upgrades for HH-60 helicopters and HC-130H aircraft;
- Procurement of long-lead material for and production

of the third National Security Cutter;

- Completion of design and procurement of the long-lead material for the first Offshore Patrol Cutter—five years ahead of the original schedule;
- Testing and evaluation of the first Fast Response Cutter 10 years ahead of original schedule; and
- Service-life extension and electronics upgrades for 10 legacy Medium Endurance Cutters (WMECs).

Increased FY 2006 funding for Deepwater assets will yield essential system-wide capability for maritime homeland security missions and sustain operational effectiveness in all of the Coast Guard's military, multimission, and maritime responsibilities—directly supporting the Coast Guard's overarching FY 2006 budget goals to recapitalize, implement the *Maritime Strategy for Homeland Security*, and enhance mission performance. Throughout our efforts, the Deepwater Program will guide the Coast Guard's transformation with a steady focus on

the Commandant's priorities of people, readiness, and stewardship.

When improved Deepwater platforms and systems enter service, they will reduce maritime security risks and help to close today's capability gaps by strengthening "smart borders" and protecting our nation's ports, waterways, and coastal areas. Deepwater will enable a layered, defense-in-depth maritime security strategy using 21st-century technologies—all premised on far more effective levels of cooperation and collaboration within the Department of Homeland Security, the Department of Defense, and our foremost joint partner, the U.S. Navy. Deepwater's contributions to National Fleet Policy goals are readily apparent.

The past year's effort to execute the Deepwater Program has been impressive in terms of the commitment and accomplishment demonstrated by our Coast Guard-industry team. We take our business one year at a time—and performance is the way ahead. It is an exciting time to serve!

*Rear Adm. Stillman, the first Program Executive Officer of the Integrated Deepwater System, leads the largest recapitalization program in the Coast Guard's history. This innovative acquisition program will develop, acquire, and sustain an affordable, integrated system of surface, air, command and control, and logistics assets to serve U.S. maritime safety and security needs. His career includes numerous afloat assignments, including command of the Coast Guard Barque EAGLE and the cutters FORWARD and CAPE CROSS. Rear Adm. Stillman graduated from the U.S. Coast Guard Academy in 1972 with a Bachelor of Science degree. He holds a Master of Arts degree from Wesleyan University at Middletown, Conn., and a master degree in public administration from George Washington University, Washington, D.C.*

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